

integrity through both active and passive means (see Figure 6) will be emphasized.

VEG-9: Approximately 80,000 acres of BLM-administered land (11% of the entire Monument) will be restored. About 31,000 acres of annual grassland and 49,000 acres of highly degraded low elevation sagebrush steppe (poor to fair biotic integrity) will be treated to control cheatgrass and restore big sagebrush cover with a perennial understory.

VEG-10: All special status species in the Monument will be inventoried with monitoring plans established, particularly when and where adverse impacts may occur.

VEG-11: Actions and stipulations necessary to protect special status species and their habitats will be made part of land use authorizations (e.g., limiting fragmentation of special status species populations when considering road maintenance) and fire planning.

VEG-12: Use of native plants will be emphasized in rehabilitation and restoration projects, and only native plants will be used for rehabilitation or restoration projects within the Pristine Zone. Integrated weed management principles will be used to

- detect and eradicate all new infestations of noxious weeds;
- control existing infestations; and
- prevent the establishment and spread of weeds within and adjacent to the planning area.

VEG-13: Weed infestations in wilderness areas will be controlled by methods consistent with minimum tool requirements and integrated weed management principles, including prevention of distur-



bance activities, use of cultural and mechanical methods to control or physically remove noxious weeds, and selective application of herbicides and possibly biological controls.

VEG-14: Integrated weed management principles will be applied proactively throughout all zones. This program will emphasize protection of weed-free areas and aggressive detection and control of noxious or highly invasive exotic weeds and will include an analysis of the trade-offs involved in herbicide use versus non-chemical methods of weed control.

VEG-15: Only certified weed-free hay, straw, and mulch will be permitted within the Monument.

VEG-16: Wildland fire will be suppressed to protect life and property, healthy sagebrush steppe communities, recent rehabilitation and restoration projects, cultural sites, and the Little Cottonwood Creek watershed.

VEG-17: Fire will be managed to maximize protection and restoration of sagebrush steppe in the Passage and Primitive Zones.

VEG-18: Wildland fire use will be allowed in the Wilderness and Preserve except when incompatible with resource management objectives

MONITORING OF VEGETATION ALLOWS MANAGERS TO DETERMINE WHETHER DESIRED CONDITIONS ARE BEING ACHIEVED.

or there is danger to life or property.

- VEG-19: Limited prescribed fire (<500 acres) will be used in the aspen, conifer, and mountain shrub vegetation types to improve wildlife habitat and invigorate plant communities while protecting the Little Cottonwood watershed.
- VEG-20: In the event of wildland fire, burned areas will be rehabilitated when necessary to restore the appropriate mosaic of sagebrush species and subspecies, along with a diverse perennial understory, and to suppress invasive and noxious weeds.
- VEG-21: The cooperative arrangement between the Bureau of Land Management and the National Park Service related to fire management will continue, including cooperative agreements with local fire departments and rural fire districts.
- VEG-22: The Bureau of Land Management and the National Park Service will develop a joint fire management implementation plan for the Monument.
- VEG-23: The network of main arterial roads will be managed to support access for wildland fire suppression.

WATER RESOURCES

Surface water resources are limited in the Monument. Stream channels are largely nonexistent within the exposed lava flows, and streams draining the Pioneer Mountains rapidly become subterranean once they encounter the lava flows. There are several small perennial streams in the Pioneer Mountains at the north end of the Monument. The entire watersheds of Little Cottonwood and Leech Creeks are in the Monument. Very short segments of the Little Wood River, Big Cottonwood

Creek, Fish Creek, and Huff Creek fall just within the Monument boundaries.

The slopes of the Pioneer Mountains contain numerous perennial and ephemeral springs that feed small creeks and marsh wetlands. Just north of the Craters of the Moon Lava Field is a small hot springs complex. Parts of Lava Lake and Huff Lake are also in Monument boundaries. Dozens of groundwater-fed pools exist in the lava flows near Carey Lake marsh. Seasonal playa lakes are scattered throughout the sagebrush steppe desert. Many of these playas have been developed by the Bureau of Land Management to create reservoirs, which increases their water holding capacity and longevity. Numerous caves within the Monument lava flows contain year-round ice deposits, which produce melt water during the summer.

Steep-sided canyons with high gradient channels and a narrow floodplain characterize the watershed of Little Cottonwood and Leech Creeks. Mean discharge rates for both streams are less than 1 cubic foot per second. Streamwater quality in Little Cottonwood and Leech Creeks has been monitored and has generally been found to be good, with no violations of Idaho state standards for temperature, dissolved oxygen, and turbidity (Falter and Freitag 1996).

The state granted the National Park Service federal reserved water rights within the original Monument in 1998. The rights provide for domestic, irrigation, or industrial use within the Monument, as well as in-stream flow rights on areas including Little Cottonwood and Leech Creeks (Hurlbutt 1998). The Bureau of Land Management has 337 filed water right claims on 18 springs, 192 playa lakes, and 127 reservoirs within the Monument. Priority dates of the water rights claims are as early as 1926.

Many of the water resources in the Monument are used in a variety of ways —



GROUND WATER HAS CREATED WATER HOLES WITHIN THE LAVA FLOWS NEAR CAREY LAKE.

drinking water for the visitor center and campground, irrigation water for farms, livestock watering sites, and recreational opportunities like bird watching. Human use and activities may alter water and associated resources. Playas and reservoirs developed by the Bureau of Land Management are an integral part of this semiarid ecosystem, and they often are the only source of water for wildlife and livestock.

Desired Future Conditions:

Riparian areas and wetlands within the planning area are maintained, restored, or enhanced so that they provide diverse and healthy habitat and water quality conditions for riparian and wetland obligates and other wildlife species.

Little Cottonwood watershed yields sufficient safe drinking water for current public and administrative uses in the visitor center complex.

Management Actions:

WATER-1: No additional playas will be modified or developed.

WATER-2: Playas will be evaluated for restoration on a case-by-case basis.

WATER-3: The agencies will work with appropriate state authorities to obtain water resources needed for Monument purposes.

WILDLIFE, INCLUDING SPECIAL STATUS SPECIES

During some portion of each year, about 200 species of birds, 60 species of mammals, 10 species of reptiles, and at least three species of amphibians can be found in the Monument. (See the Proposed Monument Management Plan / Final Environmental Impact Statement, Appendixes D and E, for more information on these species.) Limited surveys in the late 1960s identified more than 2,000 species of insects (Horning and Barr 1970).

Sagebrush steppe communities comprise much of the wildlife habitat in the Monument. Sagebrush obligates that occur in the Monument include the sage sparrow, black-throated sparrow, Brewer's sparrow, sage thrasher, Greater sage-grouse, pygmy rabbit, sagebrush vole, and sagebrush lizard. Some species, such as Brewer's sparrows, are at their highest densities statewide in ungrazed portions of the Monument (Bart 2001).

Extensive lava flows also serve as habitat for numerous animal species. At least seven species of bats, several species of rodents, and several species of cave invertebrates use lava tubes and flows in the Monument. The flow surfaces also are used by many species of vertebrates and invertebrates, and several species are dependent on the lava structures. Species such as pika, woodrats, skinks, and rock wrens are found primarily on the rock surfaces. Several snake and bat species are dependent on cavities in the lava for hibernation sites. Two of the three known bat maternity colonies of Townsend's big-eared bat in Idaho are found in the Monument lava tube caves (Pierson et al. 1999).

Six species of large mammals are known to inhabit the Monument — mule deer, pronghorn, elk, cougar, black bear, and moose. Most are widespread throughout the Snake River Plain and Pioneer Mountains and regularly can be found in the Monument.

Special status species are those listed as endangered or threatened under the Endangered Species Act; candidates or species proposed for listing under the act; species listed by the Idaho Department of Fish and Game as endangered, threatened, or species of special concern; and/or species listed by the Bureau of Land Management as sensitive. The Bureau of Land Management manages all species identified as sensitive to minimize the need for future listing as threatened or endangered under the Endangered Species Act. The National Park Service strives to manage its lands to protect any federally listed, state-listed, or BLM-listed species.

The U.S. Fish and Wildlife Service has provided a list of endangered, threatened, proposed, and/or candidate species that may be present in the area of the Monument (see Table 4). According to this list, threatened and endangered animal species that could potentially occur in the

Monument area are Canada lynx (*Lynx canadensis*), gray wolf (*Canis lupus*), bald eagle (*Haliaeetus leucocephalus*), bull trout (*Salvelinus confluentus*), Bliss Rapids snail (*Taylorconcha serpenticola*), Utah valvata snail (*Valvata utahensis*), and Snake River physa (*Physa natricina*). However, sufficient habitat for Canada lynx, bull trout, and the snails is not available. The Monument area is not in a lynx analysis unit because it lacks suitable habitat for the species. There is not adequate surface water present in the Monument area for the survival of bull trout or the snails, all of which require substantial riverine habitat.

Greater sage-grouse (*Centrocercus urophasianus*) is a BLM sensitive species. Since 1950, 148 Greater sage-grouse leks have been documented on BLM-administered land in the Monument. Between 1979 and 1983, 83 leks were active, and between 1999 and 2003, there were 53 active leks. These observations (made by the Idaho Department of Fish and Game personnel) indicate a 36% decrease in Greater sage-grouse leks over the past 25 years.

Pygmy rabbits have been documented in several areas of the Monument. Records ranging from the 1930s through 2003 indicate locations from the southernmost areas to the original Monument lands (Hoffman 1988). Pygmy rabbit populations have experienced severe declines throughout their range, including in Idaho. The rabbits generally prefer mature sagebrush stands with a dense canopy cover (Gabler et al. 2001). However, there are few surveys for the species in southern Idaho, and the distribution and status of the species is not well understood.

The Monument contains hundreds of caves and several cave-related species of concern, including seven species of bats that are U.S. Fish and Wildlife Service species of concern, Idaho species of special concern, or BLM sensitive species. As of 1999, three maternity colonies of

Townsend's big-eared bat (*Corynorhinus townsendii*) have been identified in Idaho (Pierson et al. 1999), with two occurring in the Monument. Numerous hibernacula have been identified in the Monument for this and other bat species. Six other cave roosting bat species that are classified as sensitive or of concern are found in the Monument (see Table 4; Keller 1996). In addition to bats, other cave species are of concern, including the blind cave leiodid

beetle (*Glaucoicavicola bathyscioides*). Two of the four known worldwide sites for this species are in the Monument (Idaho Conservation Data Center 2002).

Desired Future Conditions:

Habitat within the planning area supports a diverse range of native wildlife species and gives the public high-quality opportunities for wildlife-based recreation.

TABLE 4. SPECIAL STATUS ANIMAL SPECIES IN THE MONUMENT

SPECIES	STATUS		
	Federal	BLM	Idaho
MAMMALS			
Gray wolf (<i>Canis lupus</i>)	T		
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	I	S	S
Western small-footed myotis (<i>Myotis ciliolabrum</i>)	I	W	
Long-eared myotis (<i>Myotis evotis</i>)		W	
Fringed myotis (<i>Myotis thysanodes</i>)		S	S
Long-legged myotis (<i>Myotis volans</i>)	I	W	
Yuma myotis (<i>Myotis yumanensis</i>)	I	W	
Western pipistrelle (<i>Pipistrellus hesperus</i>)	I	W	S
Pygmy rabbit (<i>Brachylagus idahoensis</i>)	I	S	S
Kit fox (<i>Vulpes macrotis</i>)	I	S	
Piute ground squirrel (<i>Spermophilus mollis</i>)		S	
BIRDS			
White-faced Ibis (<i>Plegadis chihi</i>)	I	S	
Bald eagle (<i>Haliaeetus leucocephalus</i>)	T		
Northern goshawk (<i>Accipiter gentilis</i>)	I	S	S
Ferruginous hawk (<i>Buteo regalis</i>)	I	S	
Swainson's hawk (<i>Buteo swainsoni</i>)		W	
Prairie falcon (<i>Falco mexicanus</i>)		S	
Peregrine falcon (<i>Falco peregrinus</i>)			E
Dusky grouse (<i>Dendrogapus obscurus</i>)		W	
Greater sage-grouse (<i>Centrocercus urophasianus</i>)	I	S	
Columbian sharp-tailed grouse (<i>Tympanuchus phasianellus columbianus</i>)	I	S	S
Wilson's phalarope (<i>Phalaropus bicolor</i>)		W	
Long-billed curlew (<i>Numenius americanus</i>)	I	W	
Black tern (<i>Chlidonias niger</i>)			S
Short-eared owl (<i>Asio flammeus</i>)		W	
Western burrowing owl (<i>Athene cunicularia</i>)	I	W	S
Calliope hummingbird (<i>Stellula calliope</i>)		S	
Lewis' woodpecker (<i>Melanerpes lewis</i>)		S	

TABLE 4. SPECIAL STATUS ANIMAL SPECIES IN THE MONUMENT

Red-naped sapsucker (<i>Sphyrapicus nuchalis</i>)		W	
Williamson's sapsucker (<i>Sphyrapicus thyroideus</i>)		S	
Olive-sided flycatcher (<i>Contopus borealis</i>)		S	
Loggerhead shrike (<i>Lanias ludovicianus</i>)	I	S	S
Cordilleran flycatcher (<i>Empidonax occidentalis</i>)		W	
Hammond's flycatcher (<i>Empidonax hammondi</i>)		S	
Willow flycatcher (<i>Empidonax traillii</i>)		S	
Pinyon jay (<i>Gymnorhinus cyanocephalus</i>)		W	
Sage thrasher (<i>Oreoscoptes montanus</i>)		W	
Green-tailed towhee (<i>Pipilo chlorurus</i>)		W	
Grasshopper sparrow (<i>Ammodramus savannarum</i>)		W	
Brewer's sparrow (<i>Spizella breweri</i>)		S	
Sage sparrow (<i>Amphispiza belli</i>)		S	
Black-throated sparrow (<i>Amphispiza bilineata</i>)		S	
Brewer's blackbird (<i>Euphagus cyanocephalus</i>)		W	
Cassin's finch (<i>Carposodacus cassinii</i>)		W	
REPTILES & AMPHIBIANS			
Western night snake (<i>Hypsiglena torquata</i>)		S	
Western toad (<i>Bufo boreas</i>)	I	S	S
Short-horned lizard (<i>Phrynosoma douglassi</i>)	I	S	
INVERTEBRATES			
Idaho dunes tiger beetle (<i>Cicindela arenicola</i>)		S	
Blind cave leiodid beetle (<i>Glacivicola bathysciodes</i>)	I	S	S
Idaho pointheaded grasshopper (<i>Arolophitus pulchellus</i>)	I	S	

Federal Designations:

T = Federally Listed as Threatened

I = Species of Concern

BLM

S = Bureau of Land Management Sensitive Species: In this listing, all species without other current status but formerly federal candidates or state species of concern; additionally all species with either federal or state status should also be considered BLM Sensitive Species.

W = Watch list species: Species that are not BLM Sensitive Species but current population or habitat information suggests that the species may warrant sensitive species status in the future.

Idaho Species of Special Concern: (Native species that are either low in numbers, limited in distribution, or have suffered significant habitat losses)

E = Endangered

S = Special Concern

Habitat for migratory birds, including forage, water, cover, structure, and security, is available within the Monument to support healthy populations of resident and migrant species.

Greater sage-grouse restoration habitat (R1 & R2) will achieve significant progress towards reclassification as Key habitat. (See glossary for definitions and details.)

High-quality habitats for sagebrush obligate species are provided.

Species composition in key Greater sage-grouse habitat will reflect site potential.

Management Actions:

WLIFE-1: Inventory and monitoring of wildlife will emphasize species that are regionally or nationally important.

WLIFE-2: A monitoring program will be established to detect species populations in decline and species as indicators of the health of the ecosystem, and to record the presence of species of special concern.

WLIFE-3: The National Park Service, in consultation with the state and tribes, will designate areas within the Preserve and periods of time when no hunting will be permitted for protection of the area's resources.

WLIFE-4: On all NPS-administered lands, predator control will not be authorized by the Park Service except on a case-by-case basis.

WLIFE-5: Native animal species identified as pests will be managed in accordance with the applicable BLM or NPS management policies depending upon the administrative area in which the pest occurs.

WLIFE-6: All special status species in the Monument will be inventoried

with monitoring plans established, particularly when and where adverse impacts may occur.

WLIFE-7: Actions and stipulations necessary to protect special status species and their habitats will be made part of land use authorizations (e.g., limiting fragmentation of special status species populations when considering road maintenance) and fire planning.

WLIFE-8: Active and historic leks will be protected from disturbance during the Greater sage-grouse breeding season. Some examples of potential protective measures as presented in the Idaho Sage-grouse Advisory Committee's 2006 Conservation Plan for the Greater Sage-grouse in Idaho include the following:

- Apply use restrictions where needed and appropriate on existing roads or trails near occupied leks to minimize nonessential activity between 6:00 PM to 9:00 AM (in general this guideline should be applied from approximately March 15 through May 1).
- Avoid human activities such as fence maintenance or construction or any project or related work at or near (1 km or 0.6 mile) occupied leks that results in or will likely result in disturbance to lekking birds, between 6:00 PM to 9:00 AM (in general this guideline should be applied from approximately March 15 through May 1).
- Avoid creating unnecessary disturbances related to livestock management activities near occupied leks whenever possible.

- Improve the dissemination of information to elementary and high school students, hunters, resource user-groups, and others to increase their understanding of Greater sage-grouse and sagebrush steppe conservation issues.
- Monitor leks in a manner that minimizes disturbance to Greater sage-grouse following established protocol (Idaho Sage-grouse Advisory Committee 2006, Sections 5.2.1.1 and 5.2.1.2).

Note: Road closures or restrictions during the Greater sage-grouse breeding season will not apply to agency (BLM and NPS) vehicles, including Idaho Department of Fish and Game vehicles and personnel who conduct necessary Greater sage-grouse inventory and monitoring.

WLIFE-9: Consistent with Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (USDI BLM 1997) determinations, livestock grazing management will be modified as necessary to ensure that key Greater sage-grouse habitat achieves site potential.

WLIFE-10: The Bureau of Land Management will continue to hold annual meetings and coordinate closely with U.S. Department of Agriculture, Wildlife Services Program, and livestock lessees to reduce livestock losses. The Bureau of Land Management will encourage using non-lethal methods, education, and the targeting of specific offending

animals for lethal methods. These procedures will be implemented to protect both public safety and the natural resources for which the Monument was designated.

AIR QUALITY

The Monument is within one of the cleanest air regions of the country. While generally well below the national average for most air pollutants, some pollutants, such as ozone, are currently trending upwards. Air quality varies, depending on the location within the unit, the pollutant being measured, the season and time of day, wind direction, and climatic factors. Clean air greatly enhances the understanding and appreciation of the Monument's geologic resources by allowing clear views of distant landscape features.

The Craters of the Moon National Wilderness Area (43,243 acres) within the Monument is a mandatory Class I area, as defined in Clean Air Act (42 U.S. Code Sections 7401-7671q; as amended in 1990, Public Law 101-549). Congress created a Prevention of Significant Deterioration (PSD) section, the purpose of which is "to preserve, protect, and enhance the air quality in national parks, national wilderness areas and other areas of special national or regional natural, recreational, scenic, or historic value." Specifically, the PSD section reflected the law's intention that, among the clean air regions of the country, certain areas — the Class I areas — deserve the highest level of air quality protection. The impairment of visibility within Class I areas was a major concern addressed in the Clean Air Act. Because of the Class I designation the National Park Service has operated an extensive air quality monitoring program at the Monument for more than 25 years.

The rest of the Monument is a Class II area (including the Wilderness Study Areas). Class II areas also have limits on

increases of particulate matter and sulfur dioxide above baseline concentrations. The allowable increases for Class II areas are higher than those established for Class I areas.

Desired Future Conditions:

Air quality related values, particularly visibility, within the Class I Craters of the Moon Wilderness Area are not degraded and adverse impacts do not occur.

Air quality parameters that negatively affect human health, visibility, or biological diversity remain at or below current levels.

Management Actions:

The agencies will work proactively with surrounding communities, land manage-



MONITORING OF AIR QUALITY HAS BEEN AN ONGOING ACTIVITY IN THE MONUMENT SINCE 1980.

ment agencies, and the Idaho Department of Environmental Quality to limit increases of particulate matter and sulfur dioxide, which could reduce visibility, throughout the entire Monument.

CULTURAL RESOURCES

ARCHEOLOGICAL AND HISTORICAL RESOURCES

Both the National Park Service and the Bureau of Land Management are responsible for identifying, protecting, managing, and enhancing archeological, historic, architectural, and traditional lifeway values located on their lands, as well as those that might be affected by BLM or NPS undertakings on non-federal lands. The National Park Service and the Bureau of Land Management both manage archeological remains, historic values, and traditional cultural properties important to federally recognized Native American tribes.

There are more than 500 known, recorded cultural resources sites in the Monument, representing a variety of types and chronological periods, dating from at least 8,000 years old to the present. Identified prehistoric sites include lithic scatters, rock shelters, rock structures and piles,

and pictographs. Near the north end of the Monument there may be stone tool quarry sites yet undocumented. These remains mainly represent activities in the area before European contact in the 1800s.

The Monument contains portions of Goodale's Cutoff, which was an alternate route of the Oregon Trail that skirted the northern edge of the Craters of the Moon Lava Field. Portions of Goodale's Cutoff from US 20/26/93 in Butte County west to Blaine County are on the National Register of Historic Places. Historic sites in the Monument include portions of the historic trail, as well as sheepherder camps, cairns, and dumps. A few stock-raising homestead claims were filed in the Monument in the 1890s and early 1900s, but the environment proved too harsh for them to succeed and most were canceled. Virtually no visible physical evidence of these endeavors remains (Louter 1995). During the early days of Euro-American settlement in southern Idaho, sheep and

cattle grazing were the predominant economic pursuit in this area. During the late 19th and 20th centuries, silver, gold, and lead mining also took place in the mountains just north of the Monument.

The Monument headquarters complex, including the visitor center, employee residences, and maintenance buildings, was recently determined to be eligible for nomination to the National Register of Historic Places (USDI NPS 2000b). The eligibility is based on the continued integrity of the modern architectural design with grouping of public and administrative facilities in a headquarters area. This approach typified the NPS Mission 66 Program of the late 1950s and early 1960s (Allaback 2000). Mission 66 was a 10-year development program designed to upgrade facilities throughout the National Park System. The current NPS visitor center and headquarters complex was designed and constructed during the Mission 66 era of National Park development. The concept of a single complex incorporating public facilities, interpretive programs, and administrative functions originated during the Mission 66 Program.

Cultural resources are generally identified through field inventories conducted by qualified professionals in compliance with Section 106 of the National Historic Preservation Act of 1966 or under the authority of Section 110 of that act. Interviews and historical records can also be used to identify archeological, historical, and traditional lifeway values. David Louter (1995) completed the Craters of the Moon National Monument: Historic Context Statement.

Three types of inventories — Class I, II, and III — are conducted to identify and assess cultural values on BLM lands. A Class I inventory, a literature review, was completed for the BLM portion of the Monument in 1982, as part of a larger study that included the Boise and Shoshone management areas. Since then, several smaller Class III intensive

inventories have been completed in the Monument to fulfill Section 106 responsibilities. These inventories were associated with project activities where sites needed to be identified and evaluated to protect significant values and minimize effects on these values. No Class II inventories have been conducted in the Monument. No formal inventories for traditional cultural properties of importance to tribes have been completed for the Monument.

Over the years, several different universities have also conducted Class III inventories on the Monument, unassociated with any specific development project, expanding the information base. It is estimated that less than 5% of the Monument has been intensively inventoried for cultural resources. No systematic inventory of the caves associated with the lava flows has been completed. There may be many important cultural resources associated with the lava tubes, as well as the harder to reach kipukas, which have not been recorded by archeologists because of their remote nature.

Early surveys in the 1960s suggested that there was not a great deal of prehistoric use in this area, but more recent surveys on the adjacent BLM lands would seem to indicate otherwise. These early surveys were concentrated in areas archeologists deemed likely because they contained known water sources. We now know that Native Americans used this area much more than archeologists originally believed. Data from recent nearby fire rehabilitation surveys indicate a rather high density of prehistoric sites in association with the lava flows. Therefore, it is believed that there is a significant prehistoric cultural component associated with the Monument area, in addition to the well-documented historic component.

Cultural resource conditions and trends within the Monument vary considerably because of the variability of terrain and geomorphology, access and visibility, and past and current land use. Exposed

artifacts and features on the ground surface can be disturbed by elements such as wind and water erosion, animal and human intrusion, and development and maintenance activities. Based on limited site monitoring and documentation, the trend of site conditions within the Monument is considered stable in most areas. Vandalism and unauthorized collection at sites constitutes the main source of cultural resource degradation.

Looting of archeological sites has been occurring in the Monument for some time, especially in the remote, hard-to-reach kipukas. With the advent of Internet auctions, illegal artifact collection is becoming more profitable than ever. As long as there is a market, looting will continue to be a problem.

It is likely there are many sites in the interior of the lavas that are unknown at present, and they might lead to clues needed to understand just what prehistoric people were doing in this area thousands of years ago. Undisturbed caves also may hold a fascinating record of the Monument's early natural history in the form of fossilized skeletal material of Pleistocene mammals. Other caves on the Snake River Plain have produced fossil remains of mammoth, grizzly bear, bison, musk ox, and camel.

Desired Future Conditions:

The extent and condition of cultural resources and traditional cultural properties are documented and adverse effects are avoided.

The agencies maintain a single, consolidated cultural resource database.

Archeological resources either listed in or eligible to be listed in the National Register of Historic Places (national register) are protected in an undisturbed condition unless it is determined through appropriate consultation that disturbance or natural deterioration is unavoidable.



THIS ENTRANCE TO BAKER CAVE HAS BEEN PARTIALLY BLOCKED BY THE ROCKS ON THE RIGHT, CAREFULLY PLACED THERE BY HUMANS SOME 700 TO 1,000 YEARS AGO.

The qualities that contribute to the eligibility for listing or listing of prehistoric/historic structures and historic trails in the national register are preserved and protected in accordance with the Secretary of the Interior's Standards, unless it is determined through appropriate consultation that disturbance or natural deterioration is unavoidable.

Management Actions:

- CULT-1: A comprehensive Archeological Overview and Assessment of known and potential archeological resources (baseline research report) within the planning area will be completed.
- CULT-2: A Cultural Resource Management Plan that describes how specific sites will be managed, defines what areas need additional inventory, and designates potential use categories for sites will be completed for the Monument.
- CULT-3: Measures such as access limitations and periodic monitoring will be identified to proactively manage and protect cultural resources, including traditional cultural properties.
- CULT-4: Projects will be planned and designed so as to avoid

- adversely impacting cultural resources where possible. The Bureau of Land Management and the National Park Service will consult with Tribes and the Idaho State Historic Preservation Officer to develop alternatives to avoid, minimize, or mitigate any potential adverse effects.
- CULT-5: Through consultation with the Idaho State Historic Preservation Officer, areas for Section 110 cultural resource inventories will be prioritized.
- CULT-6: A proactive Section 110 inventory will be conducted as funding allows, expanding the cultural resource database for the Monument.
- CULT-7: A minimum of 10% of the Monument will be inventoried (Section 110 National Historic Preservation Act) for cultural resources over the life of the plan. The focus of the Section 110 inventory will be in the Primitive and Passage Zones.
- CULT-8: The significance of known archeological and historic resources, structures, and landscapes will be evaluated and documented, in conjunction with the Idaho State Historic Preservation Officer, for listing in the national register.
- CULT-9: Activities that may affect the Goodale's Cutoff of the Oregon Trail, the NPS headquarters/visitor center Mission 66-era area, or other properties listed or eligible for the national register will be undertaken in consultation with the Idaho State Historic Preservation Officer.
- CULT-10: At-risk national register eligible sites will be monitored for vandalism or other distur-

bances and protected/stabilized as necessary.

- CULT-11: National register eligible properties will be monitored periodically, and steps will be taken to stabilize any property found to be deteriorating and to limit access as needed.
- CULT-12: The agencies will pursue more public education and interpretation off site, with increased monitoring and protection for those sites at risk.

MUSEUM COLLECTIONS

The Monument's museum collections include objects, specimens, and archival and manuscript collections that serve as scientific and historical documentation of the Monument's purpose and resources. Museum collections are currently stored at the NPS visitor center in a dedicated storage facility. There are no Native American Graves Protection and Repatriation Act materials in the existing museum collections from the Monument and Preserve. In the event that materials are inadvertently discovered or encountered during authorized archeological excavations, the affiliated tribes would be contacted immediately and the procedures outlined in the act would be followed.

Desired Future Conditions:

Museum collections (prehistoric and historic objects, works of art, historic documents, and natural history scientific specimens) are maintained according to NPS museum management program requirements.

Management Actions:

- MUSE-1: Monument collections will be accessible for legitimate research and educational purposes.

MUSE-2: All resource management records directly associated with museum objects will be managed as museum property. These and other resource management records will be preserved as part of the archival and manuscript collection because they document and provide an information base for the continuing management of the Monument's resources.



LIMBER PINE IN
PAHOEHOE LAVA.

NATIVE AMERICAN RIGHTS AND INTERESTS AND ETHNOGRAPHIC RESOURCES

Native Americans inhabited southern Idaho, including the present-day Monument lands, for thousands of years prior to European contact. Ethnographic information suggests that aboriginal populations constantly traversed the Snake River Plain during their seasonal subsistence rounds, moving to the Camas Prairie in the spring and then further into the mountains for the summer. In the fall, they would return to the Snake River for the winter (Steward 1938, Liljeblad 1957, 1960, Murphy and Murphy 1960). According to Shoshone-Bannock tribal legends and information, Indians traveled throughout the Salmon River Basin following subsistence resources based on the seasons. Some bands traveled to the Camas Prairie area to gather plants, others traveled to buffalo country, and others went to the Salmon and Snake Rivers for fish. The different bands of Shoshone, Bannock, and Paiute all have their place names for specific areas and locations within this region, which includes the

Great Rift area. Indians have always utilized the unique features of the Great Rift area for various uses, and they continue to hold this area sacred and important. This ancient way of life was dismantled when large numbers of immigrants seeking land sought to displace the tribes. During the 1850s and 1860s, treaties were negotiated with the tribes in the northwestern United States in part to acquire Indian lands for homesteading.

On July 3, 1868, the Eastern Band of Shoshone and Bannock Tribes and the United States signed the Treaty with the Eastern Band Shoshone and Bannock, commonly referred to as the Fort Bridger Treaty (15 Statute 673). In the Fort Bridger Treaty, the tribes relinquished claims on approximately 20 million acres to the United States. The Treaty retains the tribes' rights to hunt, fish, and gather natural resources, and provides other associated rights necessary to effectuate these rights on open and unoccupied lands of

the United States. The Shoshone-Bannock Tribes have a long, rich, historical association with the Monument, and their use of those trust resources continues today.

The agencies also maintain a trust relationship with the Shoshone-Paiute Tribe of the Duck Valley Reservation, which was established by Executive Order in 1877. Western Shoshone, Northern Paiute, and some Northern Shoshone people were relocated to the remote Duck Valley Reservation, which lies in northeastern Nevada and southwestern Idaho. These people once roamed much of Nevada, Oregon, and southern Idaho. The Shoshone-Paiute never formally ceded any of their territory to the U.S. government through treaty. Today, agency consultation and coordination with the Shoshone-Paiute takes place in monthly meetings with tribal representatives using a process known as Wing and Roots.

The Bureau of Land Management and National Park Service have a unique relationship with federally recognized Native American tribes and are responsible for maintaining a formal government-to-government relationship with tribal leadership. As outlined in treaties, executive orders, legislation, and federal policies, this relationship focuses on ensuring that the rights and/or interests of tribes are considered and protected. This includes consulting with tribal representatives and identifying and protecting important archeological, religious, and/or sacred sites, as well as providing tribal members appropriate access to these sites. Also included are provisions for reasonable access for tribal members to gather and harvest plant, animal, and aquatic resources on certain state and federal lands where these activities are not otherwise prohibited.

No specific sacred sites or traditional cultural properties within the Monument have been identified by the Shoshone-Bannock Tribes or Shoshone-Paiute

Tribes, but there are oral histories documenting the use of the area by tribal members. It is possible tribal members still visit the isolated areas of the Monument for spiritual purposes today. The local tribes generally do not disclose sacred site locations to federal agencies. Not knowing the location of these sacred areas makes it difficult for land managers to assess the impacts of federal actions on them. Continued consultation with tribes is the best way to maintain an open dialog so tribal members can voice their concerns should a federal action threaten a sacred site or traditional use area.

Desired Future Conditions:

Traditional cultural properties of Native American tribes and access to those properties are preserved within the Monument for the use and benefit of current and future tribal members.

For Native American tribes that have ties to this land as part of their ancestral homeland, the Monument holds meaning and value and is a place where treaty rights and religious/sacred traditions may be practiced in a manner supportive of the purpose of the Monument.

Agencies and tribes maintain a government-to-government relationship, and the agencies routinely consult on matters involving the treaty interests and/or rights of the tribes.

Tribal oral history will be considered and incorporated into interpretive materials, as well as resource management.

Management Actions:

NAAM-1: Native American tribes that have expressed an interest in traditional cultural properties within the Monument will be consulted on a regular basis regarding the management of those properties.

- NAAM-2: Handling of Native American Graves Protection and Repatriation Act materials will be addressed as a component of a Cultural Resources Management Plan.
- NAAM-3: Should any Native American Graves Protection and Repatriation Act materials ever be inadvertently discovered within the Monument, the agencies will follow the tribal consultation procedures outlined in the act regarding their treatment.
- NAAM-4: The agencies in consultation with the tribes will identify protection measures for places of traditional cultural importance to Native Americans to preserve the integrity and use of these areas as described in National Register Bulletin 38.
- NAAM-5: Agencies will consult with associated Native American tribes to develop and accomplish the programs of the Monument in a way that respects their beliefs, traditions, and other cultural values.
- NAAM-6: Agencies will consult with Native American tribes prior to taking actions that will affect natural and cultural resources that are of interest and concern to them.
- NAAM-7: Hunting, gathering, and use of certain natural resources as sacred objects for religious use will continue on the Preserve and expanded areas of the Monument.



FOR THE NATIVE AMERICAN TRIBES ASSOCIATED WITH CRATERS OF THE MOON, THE ROOTS OF BITTERROOT (LEWISIA REDIVIVA) ARE AN IMPORTANT TRADITIONAL FOOD.

LAND USE AND TRANSPORTATION

TRAVEL AND ACCESS

One of the most important issues to be considered in this planning effort is the amount and type of access to and within the Monument. This plan characterizes the existing road and trail network using the best available data on current condition and historical maintenance practices.

With the exception of road closures implicit in the application of Pristine Zone areas, decisions affecting the status or condition of all roads and trails within the Monument will be made in a follow-up travel management implementation-level plan. As stated in the Desired Future Conditions section below, there will be a net decrease in road mileage within the Monument. All travel and access will be limited to the existing roads and trails. The existing roads and trails were evaluated by agency staff and organized into the following classification system to provide for a reasonable baseline data set to be used within the context of a more specific travel management plan to follow.

Class A — paved surface roads

Class B — improved, maintained, constructed roads with natural or aggregate surface

Class C — roads constructed or established through use with a natural surface and little or no maintenance

Class D — primitive roads established through use with no maintenance

Class 1 Trail — restricted to non-motorized/non-mechanized travel; wheelchairs allowed

Class 2 Trail — open to motorized/mechanized travel with a footprint no wider than an 18-inch tread

Table 5 summarizes the current status of roads and their designated classes in the monument.

Desired Future Conditions:

There is a net decrease in road mileage within the Monument.

TABLE 5. ROADS WITHIN THE MONUMENT

ROADS WITHIN THE MONUMENT	MILES	MAINTENANCE
Class A	30	Idaho Transportation Department maintains 21 miles; NPS maintains 9 miles.
Class B	58	BLM maintains 28 miles; remaining 30 miles maintained by Blaine (28) and Butte (2) Counties.
Class C	367	BLM maintains 365 miles, NPS maintains 1 mile, Blaine County maintains 1 mile.
Class D	173	Not maintained.
Arco-Minidoka Road	69	BLM maintains 15 Class B miles and 25 Class C miles; remaining 29 miles maintained by Butte (24) and Blaine (5) Counties.
Carey-Kimama Road	40	BLM maintains 15 miles (all Class B); remaining 25 miles maintained by Blaine (12) and Lincoln (13) Counties.